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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Parts 223 and 224**

**[Docket No. 141216999-5311-01]**

**RIN 0648-XD669**

**Endangered and Threatened Wildlife; 90-Day Finding on a Petition to List the Gulf of Mexico Bryde's Whale as Threatened or Endangered Under the Endangered Species Act**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** 90-day petition finding, request for information.

**SUMMARY:** We, NMFS, announce a 90-day finding on a petition to list the Gulf of Mexico Bryde's whale (*Balaenoptera edeni*) as an endangered distinct population segment (DPS) under the Endangered Species Act (ESA). We find that the petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted. Accordingly, we will conduct a review of the status of this species to determine if the petitioned action is warranted. To ensure that the status review is comprehensive, we solicit information pertaining to this species from any interested party.

**DATES:** Information and comments on the subject action must be received by [*insert date 60 days after date of publication in the FEDERAL REGISTER*].

**ADDRESSES:** You may submit comments, information, or data on this document, identified by NOAA-NMFS-2014-0157, by either of the following methods:

- *Electronic Submissions:* Submit all electronic comments via the Federal eRulemaking Portal. Go to [www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2014-0157](http://www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2014-0157), click the “Comment Now!” icon, complete the required fields, and enter or attach your comments.
- *Mail:* Submit written comments to NMFS, Southeast Regional Office, 263 13th Avenue South, St. Petersburg, FL 33701

*Instructions:* Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on [www.regulations.gov](http://www.regulations.gov) without change. All personal identifying information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter "N/A" in the required fields if you wish to remain anonymous).

**FOR FURTHER INFORMATION CONTACT:** Jason Rueter, NMFS Southeast Region, 727-824-5350; or Ron Salz, NMFS Office of Protected Resources, 301-427-8171.

**SUPPLEMENTARY INFORMATION:**

## **Background**

On September 18, 2014, we received a petition from the Natural Resources Defense Council to list the Gulf of Mexico population of Bryde's whale (*Balaenoptera edeni*) as an endangered DPS under the ESA. Supporting information in the form of bibliographic references, reprints of pertinent publications, copies of reports or letters from authorities, and maps as required by 50 CFR 424.14(b)(2)(iv) was not included in the petition. We requested those materials on October 10, 2014, and on October 21, 2014, we received some materials. We made a second request for outstanding information on November 26, 2014, and received materials the same day. Copies of this petition are available from us (see **ADDRESSES**, above) and can be found at [http://sero.nmfs.noaa.gov/protected\\_resources/listing\\_petitions/index.html](http://sero.nmfs.noaa.gov/protected_resources/listing_petitions/index.html)

## **ESA Statutory and Regulatory Provisions and Evaluation Framework**

Section 4(b)(3)(A) of the ESA of 1973, as amended (U.S.C. 1531 *et seq.*), requires, to the maximum extent practicable, that within 90 days of receipt of a petition to list a species as threatened or endangered, the Secretary of Commerce make a finding on whether that petition presents substantial scientific or commercial information indicating that the petitioned action may be warranted, and to promptly publish such finding in the **Federal Register** (16 U.S.C. 1533(b)(3)(A)). When we find that substantial scientific or commercial information in a petition indicates the petitioned action may be warranted (a “positive 90-day finding”), we are required to promptly commence a review of the status of the species concerned during which we will conduct a comprehensive review of the best available scientific and commercial information. In such cases, we are to conclude

the review with a finding as to whether, in fact, the petitioned action is warranted within 12 months of receipt of the petition. Because the finding at the 12-month stage is based on a more thorough review of the available information, as compared to the narrow scope of review at the 90-day stage, a “may be warranted” finding does not prejudice the outcome of the status review.

Under the ESA a listing determination addresses a “species,” which is defined to also include subspecies and, for any vertebrate species, any DPS that interbreeds when mature (16 U.S.C. 1532(16)). A joint NMFS-U.S. Fish and Wildlife Service (USFWS) policy clarifies the agencies’ interpretation of the phrase “distinct population segment” for the purposes of listing, delisting, and reclassifying a species under the ESA (“DPS Policy”; 61 FR 4722; February 7, 1996). A species, subspecies, or DPS is “endangered” if it is in danger of extinction throughout all or a significant portion of its range, and “threatened” if it is likely to become endangered within the foreseeable future throughout all or a significant portion of its range (ESA sections 3(6) and 3(20), respectively; 16 U.S.C. 1532(6) and (20)). Pursuant to the ESA and our implementing regulations, we determine whether species are threatened or endangered because of any one or a combination of the following ESA section 4(a)(1) factors: the present or threatened destruction, modification, or curtailment of habitat or range; overutilization for commercial, recreational, scientific, or educational purposes; disease or predation; inadequacy of existing regulatory mechanisms; and any other natural or manmade factors affecting the species’ existence (16 U.S.C. 1533(a)(1), 50 CFR 424.11(c)).

ESA-implementing regulations issued jointly by NMFS and USFWS (50 CFR 424.14(b)) define “substantial information” in the context of reviewing a petition to list, delist, or reclassify a species as the amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted. When evaluating whether substantial information is contained in a petition, the Secretary must consider whether the petition: (1) clearly indicates the administrative measure recommended and gives the scientific and any common name of the species involved; (2) contains detailed narrative justification for the recommended measure, describing, based on available information, past and present numbers and distribution of the species involved and any threats faced by the species; (3) provides information regarding the status of the species over all or a significant portion of its range; and (4) is accompanied by the appropriate supporting documentation in the form of bibliographic references, reprints of pertinent publications, copies of reports or letters from authorities, and maps (50 CFR 424.14(b)(2)).

Court decisions clarify the appropriate scope and limitations of the NMFS’ review of petitions at the 90-day finding stage, in making a determination whether a petitioned action “may be warranted.” As a general matter, these decisions hold that a petition need not establish a “strong likelihood” or a “high probability” that a species is either threatened or endangered to support a positive 90-day finding.

We evaluate the petitioner’s request based upon the information in the petition, including its references, and the information readily available in our files. We do not conduct additional research, and we do not solicit information from parties outside the

agency to help us in evaluating the petition. We will accept the petitioner's sources and characterizations of the information presented, if they appear to be based on accepted scientific principles, unless we have specific information in our files that indicates the petition's information is incorrect, unreliable, obsolete, or otherwise irrelevant to the requested action. Information that is susceptible to more than one interpretation or that is contradicted by other available information will not be dismissed at the 90-day finding stage, so long as it is reliable and a reasonable person would conclude it supports the petitioner's assertions. In other words, conclusive information indicating the species may meet the ESA's requirements for listing is not required to make a positive 90-day finding. We will not conclude that a lack of specific information alone negates a positive 90-day finding, if a reasonable person would conclude that the unknown information itself suggests an extinction risk of concern for the species at issue.

To make a 90-day finding on a petition to list a species, we evaluate whether the petition presents substantial scientific or commercial information indicating the subject species may be either threatened or endangered, as defined by the ESA. First, we evaluate whether the information presented in the petition, along with the information readily available in our files, indicates that the petitioned entity constitutes a "species" eligible for listing under the ESA. Next, we evaluate whether the information indicates that the species at issue faces extinction risk that is cause for concern; this may be indicated in information expressly discussing the species' status and trends, or in information describing impacts and threats to the species. We evaluate any information on specific demographic factors pertinent to evaluating extinction risk for the species at

issue (e.g., population abundance and trends, productivity, spatial structure, age structure, sex ratio, diversity, current and historical range, habitat integrity or fragmentation), and the potential contribution of identified demographic risks to extinction risk for the species. We then evaluate the potential links between these demographic risks and the causative impacts and threats identified in section 4(a)(1).

Information presented on impacts or threats should be specific to the species and should reasonably suggest that one or more of these factors may be operative threats that act or have acted on the species to the point that it may warrant protection under the ESA. Broad statements about generalized threats to the species, or identification of factors that could negatively impact a species, do not constitute substantial information that listing may be warranted. We look for information indicating that not only is the particular species exposed to a factor, but that the species may be responding in a negative fashion; then we assess the potential significance of that negative response.

### **Analysis of the Petition**

We have determined, based on the information provided in the petition and readily available in our files, that substantial information is presented in the petition indicating that the petitioned action may be warranted. The petition contains a recommended administrative measure, provides the scientific and common name, contains a detailed narrative justification for the recommended measure, provides information on the status of the species, and includes supporting documentation. Below is a synopsis of our analysis of the information provided in the petition and readily available in our files.

### *Bryde's Whale Species Description*

The Bryde's whale (*Balaenoptera edeni*) is a baleen whale, more specifically a rorqual, belonging to the same group as the blue whale and the humpback whale. They are distributed around the tropical waters of the world between 40°N and 40°S, or in waters warmer than 16.3°C (Kato, 2002). The Bryde's whale is represented by two subspecies: *B. e. edeni* and *B. e. brydei*. The generally larger form (14-15 m in length), *B. e. brydei* or "ordinary Bryde's whale," is found in temperate and tropical waters within the Atlantic, Pacific, and Indian Oceans, with a somewhat smaller inshore group found in coastal South Africa. The smaller form (rarely exceeding 11.5m in length), *B. e. edeni*, has been found only in the Western Pacific, in waters off Asia and possibly Australia. Two other species, the sei whale (*B. borealis*) and the Omura's whale (*B. omurai*), are closely related to the Bryde's whale and often considered part of the Bryde's whale "complex" (Wada *et al.*, 2003; Sasaki *et al.*, 2006). Here the term "Bryde's whale" refers to *B. edeni* and its subspecies (*B. e. edeni* and *B. e. brydei*).

Like other rorquals, the Bryde's whale has twin blowholes behind a protruding ridge and two rows of baleen plates instead of teeth. Good descriptions of the Bryde's whale can be found in Olsen (1913) and Best (1977). These reports note that the Bryde's whale is dark smoky-gray dorsally and usually white ventrally. It is elongated, with a small, curved dorsal fin, and slender, pointed flippers. These flippers are bluish-black dorsally, grey ventrally and can reach approximately 10 percent of the total length of the animal. The throat area is dark bluish-grey, with 42-54 ventral grooves or furrows that extend back at least to the umbilicus. It has around 280 (ranging between 255 and 365)



relatively stiff baleen plates of up to 0.5 m in length on each side of the mouth. Each plate has very coarse bristles forming a “bush” at the top. A median groove extending from the umbilicus to the genital aperture is typically present.

Bryde’s whales are generally found in a range of habitats and water depths. Their distribution in the Gulf of Mexico appears highly limited to a relatively small area off the Florida Panhandle along the shelf edge in DeSoto Canyon at depths between 100 and 1,000 m (e.g., Mullin and Fulling, 2004; Širović *et al.*, 2014). There have been no confirmed records of Bryde’s whales from the Gulf of Mexico outside the U.S. Exclusive Economic Zone (EEZ), but it cannot be ruled out that the whales move outside this small area, including into the waters off Cuba or Mexico; the U.S. EEZ only makes up 35 percent of the oceanic waters of the Gulf of Mexico (NMFS, 2013).

The petitioner presented information on the status of the population of the Gulf of Mexico Bryde’s whale, and additional information was also available in our files. There have been four point estimates of population size made since 1991 for the northern Gulf of Mexico (i.e., within the U.S. EEZ only). The best abundance estimate for the Gulf of Mexico Bryde’s whale is 33 (Coefficient of Variation [CV] = 1.07) from a summer 2009 oceanic survey, with a minimum population estimate of 16 whales (NMFS, 2012). This estimate is below the 35 animals (CV = 1.10) for the 1991 to 1994 period (Hansen *et al.*, 1995) and the 40 animals (CV = 0.61) estimated for the 1996 to 2001 period (Mullin and Fulling, 2004), and greater than the estimate for 2003 to 2004, which was 15 animals (CV = 1.98) (Mullin, 2007). While there have been four point estimates made, the precision of the estimates is poor, there is no statistical difference between the maximum and

minimum estimates (NMFS, 2009), and no interpretation of population trends should be made from these values. NMFS (2009) further cautions that the available estimates, based on surveys conducted only in the U.S. EEZ, cannot account for changes in abundance from shifts in distribution beyond U.S. waters, and NMFS (2012) recommends that Bryde's whales need to be satellite tagged to determine whether they use the northeastern Gulf exclusively or travel to other areas.

#### *DPS Analysis*

The petition requests that we designate Bryde's whales in the Gulf of Mexico as an endangered DPS and presents arguments that Bryde's whales in the Gulf of Mexico meet NMFS and the U.S. Fish and Wildlife Service's (together, the Services) requirements for identifying a DPS eligible for listing. Our DPS policy identifies two elements that must be considered when identifying a DPS: (1) the discreteness of the population segment in relation to the remainder of the species (or subspecies) to which it belongs; and (2) the significance of the population segment to the species to which it belongs. A population segment of a vertebrate species may be considered discrete if it satisfies either one of the following conditions: (1) it is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors—quantitative measures of genetic or morphological discontinuity may provide evidence of this separation; or (2) it is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat conservation status, or regulatory mechanisms exist that are significant in light of section 4(a)(1)(D) of the ESA. If a population segment is considered discrete under one or more of the above conditions, its biological and ecological significance will then be considered

in light of Congressional guidance (see Senate Report 151, 96th Congress, 1st Session) that the authority to list DPSs be used “sparingly” while encouraging the conservation of genetic diversity. In carrying out this examination, the Services will consider available scientific evidence of the discrete population segment’s importance to the taxon to which it belongs. This consideration may include, but is not limited to, the following: (1) Persistence of the discrete population segment in an ecological setting unusual or unique for the taxon; (2) evidence that loss of the discrete population segment would result in a significant gap in the range of a taxon; (3) evidence that the discrete population segment represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside its historic range; or (4) evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics.

The petitioner asserts that genetic and morphological information is evidence the Gulf of Mexico Bryde’s whale population qualifies as a distinct population segment under the ESA. The petition cites Rosel and Wilcox (2014) as evidence the Gulf of Mexico Bryde’s whale population is as evolutionarily distinct as other recognized subspecies within the Bryde’s whale complex. The petition also includes information indicating those whales in the Gulf of Mexico are residents and may be geographically isolated from other Bryde’s whales. Analyzing DNA sequence data from three mitochondrial DNA and nine nuclear genes, and examining 42 nuclear microsatellite loci for 21 Bryde’s whale samples, Rosel and Wilcox (2014) found that “Gulf of Mexico Bryde’s whale haplotypes are evolutionarily distinct from other members of the Bryde’s

whale complex.” Further, Rosel and Wilcox (2014) found that Gulf of Mexico Bryde’s whales are as divergent as the two already recognized subspecies of Bryde’s whales. Rosel and Wilcox (2014) also stated that the divergence is as great as two species generally are from one another, thus we find that the petition presents substantial evidence that the DPS policy’s criteria for discreteness may be met for the Gulf of Mexico Bryde’s whale.

The petitioner also argues that the Bryde’s whale in the Gulf of Mexico is significant because of its unique genetic characteristics, its behavior and morphology, and because it is the only resident baleen whale population in the Gulf of Mexico. The petitioners cite the findings of Rosel and Wilcox (2014) and state the genetic differentiation shown by the Gulf of Mexico Bryde’s whale makes it evolutionarily significant. The petitioners also argue that the Gulf of Mexico Bryde’s whale is behaviorally and morphologically different from other Bryde’s whales. Behaviorally, the Gulf of Mexico Bryde’s whales use a call that differs in frequency and repetitive structure from variants used in other Bryde’s whale populations (Širović *et al.*, 2014; Rice *et al.*, 2014). Morphologically, the Gulf of Mexico Bryde’s whales’ body lengths seem intermediary to the smaller *B. e. edeni* and larger *B. e. brydei* forms (Best, 1977; Rice, 1998). The petitioner also states that as the only resident baleen whale in the Gulf of Mexico, the Bryde’s whale fills a unique ecological niche. We therefore conclude that the petition presents sufficient evidence that the DPS policy’s criteria for significance may be met for the Gulf of Mexico Bryde’s whale. Because the Gulf of Mexico population of Bryde’s whale may qualify as a DPS, we will consider it a potentially

listable entity for purposes of this 90-day finding. Whether the Gulf of Mexico population of Bryde's whales constitutes a DPS will receive further analysis in the status review.

#### *Analysis of ESA Section 4(a)(1) Factors*

The petitioner states the Gulf of Mexico Bryde's whale is threatened by three (out of five) ESA Section 4(a)(1) factors: present or threatened destruction, modification, or curtailment of its habitat or range; inadequacy of existing regulatory mechanisms; and other natural or manmade factors affecting its continued existence. The petition cites the following threats as contributing to the present or threatened destruction, modification, or curtailment of habitat or range of the Gulf of Mexico Bryde's whale: (1) ship strikes, (2) acoustic impacts, (3) oil spills, (4) other toxic chemicals, (5) ocean acidification, (6) entanglement in fishing gear, and (7) trophic impacts due to overfishing. We believe that three of these threats (numbers 1, 6, and 7) should be categorized under the Section 4(a)(1) category "other natural or manmade factors."

Ship strikes are a recognized source of whale mortality (Laist *et al.*, 2006). In 2009, a Bryde's whale was struck by a ship near Tampa, Florida (Waring *et al.*, 2013); additionally, eight other Bryde's whales are known to have stranded along the U.S. coast of the Gulf of Mexico between 1975 and 1996, from unknown causes (Laist, 2001). While ship collisions probably have a negligible effect on the status and trend of most whale populations, they may have a significant effect on very small populations or discrete groups (Laist *et al.*, 2001), such as the Gulf of Mexico population of Bryde's whale. The petition also states that ship-strike risk in the Gulf of Mexico may increase in

the near future given expansion of the Panama Canal and the associated increase in vessel traffic. There was one documented, lethal ship strike of a Bryde's whale in 2009, involving a lactating female (therefore, its calf presumably ultimately died as well). Detected mortalities are a minimum estimate and almost certainly biased low. Total human-caused mortality of the northern Gulf of Mexico Bryde's whale stock is unknown, but, based on the 2009 confirmed mortality and the stock's small size, the annual human-caused mortality to the stock is greater than the stock's potential biological removal level (NMFS, 2012), meaning that the level of mortality threatens the stock's ability to achieve and maintain its optimum sustainable population. After reviewing the references and information in our files, we agree that, given the small population size, injury and death from ship strikes may be impacting Gulf of Mexico Bryde's whale to a degree that raises concerns regarding the risk of extinction.

The petition cites numerous sources detailing negative effects of acoustic impacts on marine mammals, including hearing loss, masking of biologically significant sounds, and disruption in foraging and other vital behaviors (NRC, 2003; Weilgart, 2007; CBD, 2012). The petition cites Azzara *et al.* (2013) to indicate that Gulf of Mexico shipping traffic may be disrupting sperm whale behavior and possibly communication and foraging patterns. The petition indicates the calls of Bryde's whale fall well within the range of commercial shipping noise (5 to 500 Hz [Hildebrand, 2009]) and concludes that the high levels of ambient noise in the Gulf of Mexico are likely to constrain the communication range of Bryde's whales, citing Hatch *et al.* (2012), and may potentially induce a chronic stress response, citing Rolland *et al.* (2012).

The petition also cites seismic exploration using airguns as a threat that would degrade Bryde's whale communication, based on the frequency overlap between Bryde's whale calls and the peak energy release of the airguns. Based on reports from other baleen whale species (e.g., Clark and Gagnon, 2006; Gailey *et al.*, 2007; Di Iorio and Clark, 2010; Castellote *et al.*, 2012; Blackwell *et al.*, 2013; Cerchio *et al.*, 2014), the petition suggests that seismic noise may, in addition to masking communication, directly disrupt other behaviors of Bryde's whales. When we conduct 90-day reviews of petitions, we typically look for species-specific information that a threat is operative. In this case, considering the information presented on other large cetaceans, the ubiquity of major noise-producing sources in the Gulf of Mexico, and the apparently constrained habitat of Bryde's whales, we find that there is sufficient information presented to suggest that acoustic impacts may be an operative threat to this species, despite the lack of information specific to Bryde's whales. After reviewing the information in the petition, we conclude that commercial and industrial ocean noise may be negatively affecting Gulf of Mexico Bryde's whale behavior, physiology, and acoustic habitat to a degree that raises concerns regarding the risk of extinction.

### **Petition Finding**

Based on the above information and the criteria specified in 50 CFR 424.14(b)(2), we find substantial information was presented on the "present or threatened destruction, modification, or curtailment of its habitat or range" (i.e., acoustic impacts) and on "other natural or manmade factors" (i.e., ship strikes) indicating the petitioned action of listing the Gulf of Mexico Bryde's whale (*B. e. edeni*) as an endangered DPS may be warranted.

Since we determined that the threats associated with acoustic impacts and ship strikes indicate that the petitioned action may be warranted, we did not conduct a detailed analysis of the other threats cited by the petitioner here.

Because we have found that substantial information was presented to indicate the petitioned action may be warranted, we will commence a status review of the species. During our status review, we will fully address all five of the factors set out in Section 4(a)(1). At the conclusion of the status review, we will determine whether the petitioned action is warranted. As previously noted, a “may be warranted” finding does not prejudge the outcome of the status review.

#### **Information Solicited**

As required by section 4(b)(3)(B) of the ESA and NMFS’ implementing regulations (50 CFR 424.14(b)(2)), we are to commence a review of the status of the species and make a determination within 12 months of receiving the petition as to whether the petitioned action is warranted. We intend that any final action resulting from this review be as accurate and as effective as possible. Therefore, we open a 60-day public comment period to solicit information from the public, government agencies, the scientific community, industry, and any other interested parties on the delineation of, threats to, and status of the Gulf of Mexico Bryde’s whale including: (1) historical and current distribution, abundance, and population trends; (2) life history and biological information including adaptations to ecological settings, genetic analyses to assess paternal contribution and population connectivity, and movement patterns to determine population mixing; (3) management measures and regulatory mechanisms designed to



protect the species; (4) any current or planned activities that may adversely impact the species; and (5) ongoing or planned efforts to protect and restore the species and habitat. We request that all information be accompanied by: (1) supporting documentation such as maps, bibliographic references, or reprints of pertinent publications; and (2) the submitter's name, address, and any association, institution, or business that the person represents. Section 4(b)(1)(A) of the ESA and NMFS' implementing regulations (50 CFR 424.11(b)) require that a listing determination be made solely on the basis of the best scientific and commercial data, without consideration of possible economic or other impacts of the determination. During the 60-day public comment period we are seeking information related only to the status of the Gulf of Mexico Bryde's whale.

### **References Cited**

A complete list of references is available upon request from the Southeast Regional Office, Protected Resource Division (see **ADDRESSES**).

### **Authority**

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: March 31, 2015.

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Eileen Sobeck,

Assistant Administrator for Regulatory Programs,

National Marine Fisheries Service.

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